NATURAL RESOURCES CONSERVATION SERVICE

INTERIM TEXAS CONSERVATION PRACTICE STANDARD

PARTICULATE EMISSIONS MANAGEMENT

(Ac.)

CODE 785

DEFINITION

Reducing the generation or emission of particulate materials from agricultural activities.

PURPOSE

- Maintain or improve visibility
- Maintain or improve air quality

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to all land uses on which activities occur that may produce particulate emissions (dust, smoke, and chemicals) that can reduce visibility or contribute to health problems.

Areas of particular concern are open feedlots and the service areas associated with them, unpaved farm roads and certain tillage and harvesting operations, burning, and chemical application.

CRITERIA

General Criteria Applicable to All Purposes

All treatments shall be performed in compliance with all federal, state, and local laws, rules, and regulations affecting particulate matter control.

Soil stabilizers and other oil or chemical based treatments shall be applied following manufacturer recommendations and label instructions.

Criteria Applicable to Reducing Particulate Emissions from Roads

Unpaved roads and equipment staging areas and storage yards shall be treated to reduce particulate matter generation to acceptable levels.

Water applied to reduce particulate emissions shall be applied at a rate that minimizes potential for tracking mud onto paved roads.

Road shoulders and right-of-way shall be vegetated if soil and climatic conditions permit. If it is not feasible to establish vegetation on these areas, they shall be treated with the same material used on the road.

Criteria Applicable to Reducing Particulate Emission from Animal Feeding Operations

Unpaved feedlots, corrals and walkways shall be treated to control dust generated by animal activities.

Animal feed shall be mixed during periods of low wind velocity or in an area protected from the wind.

Sprinkler systems used for water application to achieve particulate emission management, shall meet criteria in Conservation Practice Standard, Irrigation System, Sprinkler, (442).

Criteria Applicable to Reducing Particulate Emissions from Cropland

The number of field operations performed for seedbed preparation shall be reduced by fifty percent.

The amount and orientation of standing and surface residue needed and the maximum soil surface disturbance allowed to reduce particulate emissions to an acceptable level shall be determined using the current wind erosion prediction technology.

Cover crops shall be established in orchards and vineyards so that they provide at least 80% ground cover during harvest operations.

Criteria Applicable to Reducing Particulate Emissions from Burning

When burning, follow all procedures specified in agency burn policy including identification of off-site impacts.

Burns initiated for management of rangeland or forestland shall meet the criteria in conservation practice standard 462, Prescribed Burning.

Criteria Applicable to Chemical Drift

Agricultural operations shall be performed or modified to reduce/eliminate chemical drift. Site-specific application criteria listed on chemical labels shall be followed to address environmental hazards. Guidelines in Pest Management (595) shall be followed to reduce drift.

CONSIDERATIONS

Acceptable material for reducing particulate emissions from unpaved roads include water, hygroscopic (water-attracting) materials such as magnesium or calcium chloride, petroleum emulsions, polymer emulsions, bituminous materials and mulch.

Using one or more of the suite of residue management practices (329A – No till/Strip Till; 329B – Mulch Till; 329C – Ridge Till) in the cropping system will reduce the number of trips through the field and thus reduce the potential for particulate emissions.

Because residue management practices normally use fewer trips across the field, they will also reduce the amount of particulates, nitrogen oxides (NOx) and volatile organic compounds (VOCs) from internal combustion engines.

The speed at which field operations are done influences particulate matter generation. In general, slower speeds produce fewer particulate emissions.

Controlling speed and access on unpaved roads will reduce the generation of particulate matter.

Cleaning confined animal pen areas during periods of low wind velocity whenever possible will reduce transport of particulate matter offsite.

Mowing operations should be done when moisture conditions minimize generation of particulate matter.

Use tillage equipment that has been proven to reduce particulate matter generation.

Rather than burning crop residues consider chipping/shredding, composting, or utilizing residues as mulches on unpaved roads to reduce particulate matter emissions.

Irrigation water application to soil surfaces can reduce particulate matter generation.

Limiting turning of equipment and vehicles on unpaved roads can reduce particulate matter generation.

Controlling vehicle and equipment speed and access on unpaved roads can reduce generation of particulate matter.

Use more environmentally friendly disposal methods than burning for combustible materials such as bags, sacks and domestic waste.

PLANS AND SPECIFICATIONS

Plans and specifications for particulate matter management shall be in keeping with this standard and shall describe requirements for applying the practice to achieve its intended purpose.

Specifications for establishment and operation of this practice shall be prepared for each field or treatment unit according to the Criteria and Considerations described in this standard. Specifications shall be recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

The Conservation Plan shall contain documentation of operation and maintenance required for particulate matter management.

Records of operations and maintenance actions taken should be recorded and kept in the conservation plan in accordance with applicable Federal, state and local laws.

APPROVAL AND CERTIFICATION

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PRACTICE STANDARD APPROVED:

_____/s/ John Mueller_____ **_____05/27/03_____**

State Conservation Engineer **Date**

NRCS, Texas

May 2003